Exhibit 3: Emboss Align (Nucleic Acid) Alignment

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################################################
# Program:  needle
# Rundate:  Fri Dec 21 19:40:04 2007
# Align_format: srspair
# Report_file: /ebi/extserv/old-work/needle-20071221-19400372876934.output
################################################

#=======================================
#
# Aligned_sequences: 2
# 1: SEQ147
# 2: T_petrophila
# Matrix: EBLOSUM62
# Gap_penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 939
# Identity:    890/939 (94.8%)
# Similarity:  890/939 (94.8%)
# Gaps:          3/939 ( 0.3%)
# Score: 5073.0
#
#
#=======================================


SEQ147           1 atgaacgatttgatcagaaagtacgctaaagatcaactggaaactttgaa     50
                   |||||||||||||||||||||||||||||||||||||||||||·||||||
T_petrophila     1 atgaacgatttgatcagaaagtacgctaaagatcaactggaaattttgaa     50

SEQ147          51 aaggatcatagaaaagtctgaaggaatatccatcctcataaatggagaag    100
                   |||||||||||||||||||||||||||||||||||||·|||||||||·|||||||
T_petrophila    51 aaggatcatagaaaagtctgaaggaatatccattctcataaacggagaag    100

SEQ147         101 atctctcgtatccgagagaagtatcccttgaacttcccgagtacgtggag    150
                   ||||||||||||||||||||||||||||||||||||||||||||||||||
T_petrophila   101 atctctcgtatccgagagaagtatcccttgaacttcccgagtacgtggag    150

SEQ147         151 aaatttcccccgaaggcctcggatgttctggagatagatcccgaggggga    200
                   |||||||||||||||||||||||||||||||||||||·||||||||||||·|||
T_petrophila   151 aaatttcccccgaaggcctcggatgttctggaggtagatcccgaggagga    200

SEQ147         201 gaacataggcatagacgacatcagaacgataaaggacttcctgaactaca    250
                   |||||||||·|||||||||·|||||||||||||||||||||||||||||||
T_petrophila   201 gaacataggtatagacgaaatcagaacgataaaggacttcctgaactaca    250

SEQ147         251 gccccgagctctacacgagaaagtacgtgatagtccacgactgtgaaaga    300
                   ||||·||·|||||||||||||||||||||||||||||||||||||||||||
T_petrophila   251 gccctgaactctacacgagaaagtacgtgatagtccacgactgtgaaaga    300

SEQ147         301 atgacccagcaggcggcgaacgcgtttctgaaggcccttgaagaaccacc    350
                   |||||||||||||||||||||||||||||·· ||||·· |||||||||||||·||
T_petrophila   301 atgacccagcaggcggcgaacgcgttcttgaaaacccttgaagaaccgcc    350

SEQ147         351 agaatacgctgtgatcgttctgaacactcgccgctggcattatctactgc    400
                   ||||||||||||||||||||||||||||·||||·||||||||||||||||||
T_petrophila   351 agaatacgctgtgatcgttctgaacacccgccactggcattatctactgc    400
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SEQ147         401  cgacgataaagagccgagtgttcagagtggttgtgaacgttccaaaggag   450
                    ||||||||||||||||||||||||||||||||||||||||||||||||||
T_petrophila   401  cgacgataaagagccgagtgttcagagtggttgtgaacgttccaaaggag   450

SEQ147         451  ttcagagatctcgtgaaagagaaaataggagatctctgggaggaacttcc   500
                    |||||||||||||||||||||||||||||||·|||·|||||||||||||||
T_petrophila   451  ttcagagatctcgtgaaagagaaaataggcgatttctgggaggaacttcc   500

SEQ147         501  acttcttgagagagacttcaaaacggctctcgaagcctacaaacttggtg   550
                    ·||·|||||||||||||||||||||||||·||||||||||||||||||||
T_petrophila   501  gctccttgagagagacttcaaaacggctttcgaagcctacaaacttggtg   550

SEQ147         551  cggaaaaactttctggattgatggaaagtctcaaagttttggagacggaa   600
                    ||||||||||||||||||||||||||||||||||||||||||||||||||
T_petrophila   551  cggaaaaactttctggattgatggaaagtctcaaagttttggagacggaa   600

SEQ147         601  aaactcttgaaaaaggtcctttcaaaaggcctcgaaggttatctcgcatg   650
                    ||||||||·||·||·|·||||||||·||||·|||||·||||||||||||·||
T_petrophila   601  aaactcttaaagaaagccctttcagaaggactcgagggttatctcgcgtg   650

SEQ147         651  tagggagctcctggagagattttcaaaggtggaatcgaaggaattctttg   700
                    |||||||||·|||||||||||||||||||||||||||||||||||||||||
T_petrophila   651  tagggagcttctggagagattttcaaaggtggaatcgaaggaattctttg   700

SEQ147         701  cgctttttgatcaggtgactaacacgataacaggaaaagacgcgtttctt   750
                    |||||||||·||··|·||·|||||||||||||·|||||||||·|·||||||
T_petrophila   701  cgctttttgaccaattaaccaacacgataacgggaaaagactcatttctt   750

SEQ147         751  ttgatccagagactgacaagaatcattctccacgaaaacacatgggaaag   800
                    ||||||||||||||||||||||||··|·||·||||||||||||·||||||||
T_petrophila   751  ttgatccagagactgacaagaattgtccttcacgaaaacacctgggaaag   800

SEQ147         801  cgttgaagatcaaaaaagcgtgtctttcctcgattcaattctcagggtga   850
                    ||||||||||||||||||||||||||||||||||||||||||||||||||
T_petrophila   801  cgttgaagatcaaaaaagcgtgtctttcctcgattcaattctcagggtga   850

SEQ147         851  agatagcgaatctgaacaacaaactcactctgatgaacatcctcgcgata   900
                    |·|||||||||||||||||||||||||||||||||||||·||·|||||||||
T_petrophila   851  aaatagcgaatctgaacaacaaactcactctgatgaatattctcgcgata   900

SEQ147         901  cacagagagagaaagagaggtgtcaacgcttggagc        936
                    |||||||||||||||||||||||||||||||||||||
T_petrophila   901  cacagagagagaaagagaggtgtcaacgcttggagctga     939
```